

ANALYSIS AND COMMENTARY ● ● ● ● ●

This study could dramatically alter the use of diagnostic ^{131}I scans after thyroidectomy in patients who have undergone surgery for DTC. However, there is one major caveat. The group of patients studied were highly selected because they were referred to a nuclear medicine unit for ^{131}I ablation therapy, even though 43% were younger patients and less than one-half had nodal disease. The patients had more aggressive tumors than the usual group of patients with DTC. Pathology showed that 30% had vascular invasion, 63% had capsular invasion, and 26% had positive surgical margins.

The SPECT/CT showed an impressive number of patients with residual nodal disease. The finding of distant metastases on the scans in over one fourth of older patients is very surprising. There was no information provided with regard to how many of these new findings occurred in the patients with more aggressive pathologic results. In addition, there was no information concerning correlation with serum thyroglobulin in this group with distant metastases. Although the scans were read to include the classification of uptake in the thyroid bed, there was no comment on the frequency of this finding.

In patients selected for ^{131}I ablation, the positive findings on diagnostic SPECT/CT could influence the amount of the dose for ablation. Others have claimed utility for diagnostic ^{131}I scans before ablation (1). One study reported that SPECT/CT performed after radioablation was much more sensitive than planar imaging and detected nodal involvement in one fourth of patients with papillary thyroid carcinoma (2).

If the improved sensitivity for finding residual disease by SPECT/CT is confirmed in an unselected group of patients with DTC, then the wheel will have come full circle by returning to routine ^{131}I diagnostic scans in virtually all patients, a practice largely abandoned over a decade ago based on data showing that stimulated thyroglobulin and neck ultrasound are more sensitive diagnostic tools than ^{131}I scans. In the meantime, this study influences me to consider SPECT/CT for patients who are classified as low risk and who are not selected for ^{131}I ablation because a negative result would give the patient a very good prognosis. Of course cost considerations would influence the decision to use SPECT/CT in such a patient.

References

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